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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/104,947	06/25/1998	KENT J. FORBORD	1169.12-0314	4927

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02/06/2002

SHAWN B. DEMPSTER, SEAGATE TECHNOLOGY LLC
INTELLECTUAL PROPERTY DEPT SHK2LG
1280 DISC DRIVE
SHAKOPEE,, MN 55379-1863

EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 02/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/104,947

Applicant(s)

ORBORD, KENT J.

Examiner

William J. Klimowicz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 8-10 and 15-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-14 and 18-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 21.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 2, 2002 (Paper No. 22) has been entered.

Claim Status

Claims 1-32 are currently pending.

Claims 8-10 and 15-17 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected species.

Claims 1-7, 11-14 and 18-32 have been treated on the merits, *infra*.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

The baffle (174) (see page 14, line 25 of the instant specification) and the filter (180) (see page 14, line 26 of the instant specification) are apparently not depicted in the drawings. A proposed drawing correction or corrected drawings are required in reply to the Office action to

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avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 3 and 30 are objected to because of the following informalities:

With regard to claim 3 (line 5) and claim 30 (line 7), the phrase "actuator assembly" should be replaced by the phrase --actuator arm--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-5, 13, 14, 18-24, 26-29, 31 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following phrase(s) lack clear antecedent basis within the claim(s), i.e., either the particularly recited passage fails to be properly introduced prior to its appearance at that point in the claim or the structure recited in the passage is not an inherent part of or component of the previously recited structure:

(i) Claim 26 (line 2-3), "the spindle motor."

In claims 1 and 3, the recitation of the phrases "smaller than a standard diameter" as well as "standard configuration" are vague and indefinite. More concretely, disk drive "standards"

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are subject to not only changes over time, but can be considered subjective and variable. The “standard configuration” and “standard diameter” of a disk and its associated drive are not a fixed quantity, but are variable parameters. There is no express direct correspondence in the specification of what the definition of “standard configuration” and “standard diameter” with respect to a fixed number. Although the specification cites a 84 mm disk diameter and its associated 3 ½ inch configuration, the offending claims apparently are not limited to such dimensions. What happens in the future when the “standard” disk diameter is less than the specification’s 84 mm disk diameter, e.g., say a standard 65 mm disk? Would the claim scope then change “on the fly”? What was once covered under the claim (84 mm disk), would now be excluded due to a new defined “standard” and what was once not covered, (e.g., 65 mm disk) would now be covered, as being defined as a new “standard.”

The scope of the claims, in terms of its metes and bounds, is not *fixed* in any way, but continually would change as the disk drive industry standards continually changed. As has been held, a claim may be rendered indefinite by reference to an object that is variable. See *Ex parte Brummer*, 12 USPQ2d 1653 (Bd. Pat. App. & Inter. 1989). In the instant situation, the “object” in this case is considered to be a variable standard disk size or configuration.

The scope of the claim, by virtue of its recitation of continually varying standards, is in a state of *continual flux*.

The metes and bounds of the claims cannot in any way provide the public with ample notification to what is and *may* possibly be covered. The scope of the claim cannot be readily ascertained, to any reasonable objective degree. As contrasted with a standard of measurement

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(e.g., time measured in seconds, minutes, hours, etc.), disk drive “standards” are not universal and are continually changing to meet the trend toward smaller disk drives.

Additionally, e.g., with regard to claim 1, the phrase “smaller than a diameter of a rigid disc associated with the standard configuration” is completely nebulous. How is this “association” defined, and who defines it? The language is completely subjective and cannot in any way define the metes and bounds of the claim in a “definite” manner as prescribed by the 35 USC 112 second paragraph.

In summation, claims that not only flex the metes and bounds of their scope, but morph from one form into another, are not deemed to fulfill the statutory requirements of 35 USC 112 2nd paragraph.

Claims 3, 4, 13, 14, 18-20, 26-29, 31 and 32 are indefinite since it is not readily apparent to one having ordinary skill in the art, what structure corresponds to the function or acts set forth in claim 3. More specifically, 35 U.S.C. 112 sixth paragraph states:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof (emphasis in italics added).

As noted in *In re Donaldson Co.*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994) *in banc*, the Court was at pains to point out:

Our holding similarly does not conflict with the second paragraph of section 112. Indeed, we agree with the general principle espoused in *In re Lundberg*, 244 F.2d at 547-48, 113 USPQ at 534 (CCPA 1979), ***that the sixth paragraph of section 112 does not exempt an applicant from the requirements of the first two paragraphs of that section.*** Although paragraph six statutorily provides that one may use means-plus-function language in a claim, one is still subject to the

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requirement that a claim “particularly point out and distinctly claim” the invention. Therefore, if one employs means-plus-function language in a claim, ***one must set forth in the specification an adequate disclosure showing what is meant by that language.*** If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.

16 F.3d at 1195, 29 USPQ2d at 1850 (emphasis in bold italics added).

The specification lacks a definition as to what the recited “means” corresponds to. It is not known if the recited “means” refers to a particular disk size, a particular disk operational speed, the spindle motor or hub, etc. Since one of ordinary skill in the art is not reasonably apprised as to what structure in the instant specification corresponds to the claimed functional language, the metes and bounds of the claims are not readily ascertainable, and thus claims 3, 4, 13, 14, 18-20, 26-29, 31 and 32 do not satisfy 35 U.S.C 112 second paragraph.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3, 5, 13, 21-24, 26-29, 31 and 32 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a 3 1/2 inch external three-dimensional configuration having an associated disk size of 84 mm each (with a angular speed of 10,000 rpm) to provide a reduced torque relative to a stack of standard diameter disc (whatever that may be), does not reasonably provide enablement for other diameter discs used in a standard configuration, which are “smaller than a standard diameter of a rigid disc” (whatever that may

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be). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Claims 1, 3, 5, 11-13, 18-24, 26-29, 31 and 32 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling.

Apparently, the particular size of the standard configuration (3 1/2 inch external three-dimensional configuration) and its associated sized diameter disc (84 mm in diameter) are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure.

The specification discloses that the diameter of a disc 84 mm (or at least a disk smaller than a 95 mm disc) in diameter used within a 3 1/2 standard configuration disk drive, when compared to a 95 mm standard disk used in a disk drive, results in a reduced torque that is required to rotate the stack of smaller diameter 84 mm disks, as opposed to the standard 95 mm disks used in the same drive configuration of a 3 1/2 inch configuration.

The offending claims lack such dimensional limitations that apparently essential and critical to the invention.

Additionally, claims 11 and 18 recite a particular number of discs within the disk drive standard configuration (3 1/2 inch) as being "six" ... "which is greater than the number of discs of the standard configuration of five discs." The claims, however, lack the critical or essential structure (e.g., thinner bottom wall thickness being about 3.25 mm), that enables the larger number of discs to fit within the same space occupied by a smaller number of discs.

See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, 13, 21-24, 26-29, 31 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Best et al. (US H1221).

As per claims 1 and 3, Best et al. (US H1221) discloses a disc drive assembly including: a disc drive housing (150, 151) comprising a standard configuration; and a disc drive supported in the housing (150, 151) having: a stack of rotatable rigid recording discs (160) mounted to a hub (210) where each disc (160) has a diameter (e.g., see line 3 of claim 1) smaller than a standard diameter (e.g. say a conventional 95 mm disc or a disc associated with a 5 ¼ configuration) of a rigid disc associated with the standard configuration, the hub (210) being operatively configured for mounting on a spindle motor (164), where (inherently) due to the smaller diameter of the discs a reduced torque is required to rotate a stack of smaller diameter discs (160) than is required to rotate a stack of standard diameter discs (due to less inertia for a disc of a larger size with the same size spindle motor), and; an actuator assembly (173) for reading data from and writing data to a selected ones of the discs (160).

Additionally, as per claim 3, the actuator assembly (173) comprises at least one actuator arm (see FIG. 13A) with a transducer (170a), the transducer (170a) being attached to a distal end of the actuator arm, with each arm operating to position each transducer (170a) adjacent a

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respective surface of a rotating rigid recording disc (160); and means (e.g., spindle motor) for rotating a stack of rigid recording discs (160) within the housing (150, 151), each disc (160) having at least one recording surface and having a diameter (e.g., see claim 1, line 3) smaller than the diameter of a rigid disc associated with the standard configuration, where the means requires less torque to rotate a stack of smaller diameter discs (160) than is required to rotate a stack of standard diameter discs (see explanation, *supra*).

As per claim 5, each of the recording discs is a magnetic recording disc (claim 1, line 3-4 of Best et al. (US H1221)) and the stack of discs (160) are mounted to a spindle motor (164) for operational rotation at 10,000 rpm (e.g., see claim 4 of Best et al. (US H1221)).

As per claim 13, the recording discs (160) are magnetic recording discs (claim 1, line 3-4 of Best et al. (US H1221)).

As per claim 21, further comprising the spindle motor (164).

As per claim 22 and 26, where the reduction in required torque correspondingly reduces a run current required by the spindle motor (164) to rotate a stack of smaller than standard discs (160) than is required to rotate the stack of standard diameter discs. See explanation for such inherency, *supra*.

As per claim 23 and 31, the spindle motor (164) rotating the stack of smaller diameter discs (160) has a reduced power dissipation over a spindle motor rotating a stack of standard diameter discs (which are larger in diameter, since, inherently, the larger discs would have more inertia thus requiring more force and higher currents, and hence higher power usage).

As per claim 24 and 32, the spindle motor (164) rotating the stack of smaller diameter discs (160) operates at a reduced temperature from a spindle motor rotating a stack of standard

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diameter discs (which are larger in diameter, since, inherently, the larger discs would have more inertia thus requiring more force and higher currents, and hence higher power usage).

As per claim 27, where the means for rotating includes a hub (FIGS. 12A, 12B) operatively configured for mounting on a spindle motor.

As per claim 28, see, e.g., see claim 4 of Best et al. (US H1221).

As per claim 29, where a number of smaller diameter discs (160 - four) in the stack is greater than a number of standard diameter discs in the stack contained in a disc drive housing in the standard configuration (e.g., a standard configuration that uses one disk, which is conventional).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 6, 7, 11, 12, 14, 18-20, 25 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Best et al (U.S. Statutory Invention Registration H1221).

See the description of Best et al. (US H1221) in the preceding paragraph, *supra*.

As per claim 6, 14, 19, each of the magnetic recording discs has a diameter of 84 mm (see claim 1, line 3 of As per claim 13, the recording discs (160) are magnetic recording discs (claim 1, line 3-4 of Best et al. (US H1221))).

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As per claim 7, 12, and 20, the stack of discs (160) are mounted to a spindle motor (164) for operational rotation at 10,000 rpm (claim 4 of Best et al. (US H1221)).

As per claim 25, where a number of smaller diameter discs (160 - four) in the stack is greater than a number of standard diameter discs in the stack contained in a disc drive housing in the standard configuration (e.g., a standard configuration that uses one disk, which is conventional).

With regard to claims 2, 4, 11, 18 and 30, although Best et al. (US H1221) does not expressly show a standard 3 ½ inch configuration disk drive, Official notice is taken that such disk drive standard configurations are notoriously old and well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Best et al. (US H1221) within a conventional standard configured 3 ½ disk drive in order to reduce latency within a standard sized larger disk drive system, without increasing the power used in the system, etc. (see, e.g., COL. 7, lines 19- 26) in the standard sized disk drive configuration of 3 ½ .

Additionally, as per claims 11 and 18, although Best et al. (US H1221) discloses four disks in his system, as opposed to six or more, Official notice is taken that disk drives that include six disks (or more) are notoriously old and well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the disk drive of Best et al. (US H1221) with more than four disks, such as six disk as set forth in claims 11 and 18. The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the disk drive of Best et al. (US H1221) with more than four disks, such as six disk as set forth in claims 11 and 18 in order to increase the capacity

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of the disk drive, thereby enabling more information to be stored in the system; a concept which is well known, established and appreciated by one having general knowledge within the disk drive art.

Claims 1-7, 11-14 and 18-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's admitted prior art (see page 5, line 12 through page 9, line 16 and FIGS. 1 and 2 of the instant specification) in view of Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32).

As per claims 1, 3 and 30, the Applicant's admitted prior art discloses a disc drive assembly including: a disc drive housing (10) comprising a standard configuration (page 5, line 13-14 of Applicant's instant specification); and a disc drive supported in the housing (10) having: a stack of rotatable rigid recording discs (12) mounted to a hub (26) where each disc (12) has a diameter (page 5, line 17-18 of Applicant's instant specification) of about 95mm associated with the standard configuration, the hub (26) being operatively configured for mounting on a spindle motor (32).

As per claims 1, 3 and 30, however, the Applicant's admitted prior art discloses a "standard" diameter disk associated with the "standard" sized configuration. The Applicant's admitted prior art does not show a smaller sized diameter disk associated with the same standard sized configuration that houses the larger disk.

The question then becomes, is there some particular motivation or rationale as to why one of ordinary skill in the art would reduce the diameter of a disk?

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Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32 expressly discloses (as *evidenced* by Table 2.5) that by reducing the disk diameter for a given speed *advantageously* reduces the wasteful power expenditure or consumption (i.e., power dissipation). For example, at a angular disk speed of 10,000 rpms, as the diameter of the disk decreases there is a corresponding large decrease in power dissipation per disk.

Given the general knowledge within the magnetic disk drive art, as *evidenced* by (page 5, line 13-14 of Applicant's instant specification), it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a smaller than 95 mm disk within the standard 3 ½ inch configuration disk drive of Applicant's admitted prior art, as suggested by Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32. The rationale is as follows: one of ordinary skill in the art would have been motivated to provide a smaller than 95 mm disk within the standard 3 ½ inch configuration disk drive of Applicant's admitted prior art, as suggested by Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32 in order to advantageously reduce power consumption per disk, and thus reduce the power used by a stack of disks within a disk drive.

Additionally, as per claims 6, 12, 14, 19 and 30, although Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32 as applied to Applicant's admitted prior art, does not expressly disclose a "standard" 84 mm diameter disk, Official notice is taken of the fact that magnetic disks having diameters of 84 mm are notoriously old and well known in the art.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided the diameter of the disk of Applicant's admitted prior art, in light of the teachings of Magnetic Storage Handbook (Second Edition) McGraw-Hill, page

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2.32, as a “standard” diameter 84mm disk. The rationale is as follows: one of ordinary skill in the art would have been motivated to have provided the diameter of the disk of Applicant’s admitted prior art, in light of the teachings of Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32, as a standard diameter 84mm disk in order to reduce the power consumption as compared to a larger diameter 95mm disk. Moreover, absent a showing of criticality (i.e., unobvious or unexpected results), the 84mm sized diameter disk is considered to be within the level of ordinary skill in the art, given the teachings of Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32 which suggest that by decreasing disk diameter size, the power consumption per disk decreases. That is to say, Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32 teaches a *result-effective variable*; decrease disk diameter size - decrease power consumption. The prosecution history as a whole does not point to any “unexpected” results associated with a 84mm diameter disk, as opposed to any other disk smaller than a 95mm diameter disk.

Additionally, the law is replete with cases in which when the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions. See *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir.

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1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

Additionally, as per claims 11 and 18, although Applicant's admitted prior art, as applied to Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32, discloses five or 10 disks in the system, as opposed to six, Official notice is taken that disk drives that include six disks (or more) are notoriously old and well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the disk drive of Applicant's admitted prior art, in light of Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32, with six disks, as set forth in claims 11 and 18. The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the disk drive of Applicant's admitted prior art, in light of Magnetic Storage Handbook (Second Edition) McGraw-Hill, page 2.32, with six disks, as set forth in claims 11 and 18 in order to increase the capacity of the disk drive (as opposed to a five disk system), thereby enabling more information to be stored in the system, or conversely to reduce the height of the system (in the case of an original 10 disk system); a concept which is well known, established and appreciated by one having general knowledge within the disk drive art.

Response to Arguments

Applicant's arguments with respect to claims 1-7, 11-14 and 18-32 have been considered but are moot in view of the new ground(s) of rejection.

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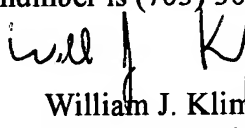
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (703) 305-3452. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.


William J. Klimowicz
Primary Examiner
Art Unit 2652

WJK
January 31, 2002